

AUG 26 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re: Robert L. Payer Confirmation No: 2495
 Serial No: 09/884,844 Group: 2826
 Filed: June 19, 2001 Examiner: Erdem, Fazli
 For: Hermetic Package with Internal
 Ground Pads
 Customer No.: 25263
 Attorney 1066us
 Docket No.

APPELLANT'S BRIEF

VIA FACSIMILE: 571-273-8300
 Mail Stop Appeal Brief- Patents
Commissioner for Patents
 P.O. Box 1450,
 Alexandria, Virginia 22313-1450

08/29/2005 MBIZUNES 00000039 501547	09884844
01 FC:2252	225.00 DA
08/29/2005 MBIZUNES 00000039 501547	09884844
02 FC:2402	250.00 DA

Sir:

This is the Applicant's appeal from the final Office Action, mailed January 26, 2005 (Paper No. 01242005).

A two-month extension is requested for this brief.

Real Party in Interest

Axsun Technologies, Inc. is the real party of interest.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of Claims

Claims 1-9 are pending in this application. Claims 1-9 stand finally rejected pursuant to the outstanding final Office Action.

26 August 2005
Application No.: 09/884,844
Docket: 1066us

Status of Amendments

All amendments have been entered. There were no post final amendments or proposed amendments.

Summary of Claimed Subject Matter

Fig. 1 from the application below shows the overall context of the invention. Specifically, it shows an optoelectronic hermetic package 100. This comprises a frame 110 that defines a hermetic boundary. This hermetic boundary is completed when a lid, not shown, is welded or otherwise attached to the top 116 of the sidewall 114 to seal the package 100.

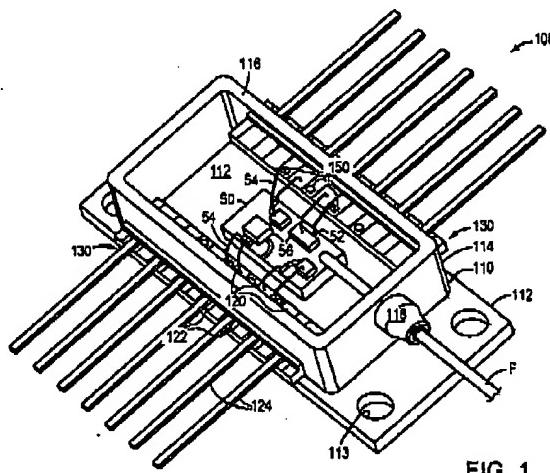


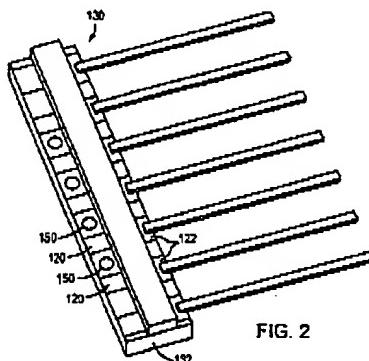
FIG. 1

This type of butterfly package 100 is very common in the packaging of optoelectronic devices.

This package design presented a problem to the inventor as he sought to produce optoelectronic devices with higher levels of integration. More active devices in the electronic package required concomitantly more electrical connections to those devices. Thus, at high levels of integration, the devices could become bond pad constrained—there were not enough bond pads to support the necessary electrical connections while maintaining wiring bonding rules such as not crossing wirebonds.

26 August 2005
 Application No.: 09/884,844
 Docket: 1066us

The invention concerns the provision of an electrical feed through assembly 130 shown in Fig. 2 below. This assembly is provided with a combination of signal wire bond areas 120 and ground wire bond areas 150.



As illustrated in incorporated Fig. 3 below, the electrical feedthrough assembly provides for the electrical interconnection of these ground wire bond areas 150 using a combination of plugs 152 and the frame 110 of the package. So, in effect, the number of leads 124 (see Fig. 1) is effectively increased by allowing multiple ground connections/ground bond pads to be supported by a single lead 124.

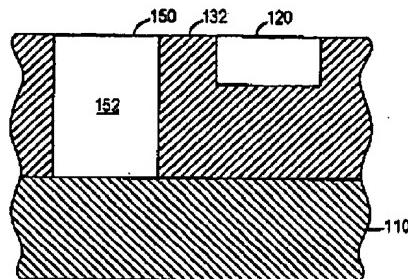


FIG. 3

Grounds of Rejection to be Reviewed on Appeal

Whether claims 1-9 are unpatentable over Bargar, *et al.* (5,222,170) in view of Kluitmans, *et al.* (5,065,226) and further in view of Wolf, *et al.* (6,414,835).

26 August 2005
Application No.: 09/884,844
Docket: 1066us

Argument

Applicant respectfully believes that the present claimed invention of claim 1, for example, would not be obvious over the combination of the Bargar, Kluitmans, and Wolf patents.

The strongest argument in support of non-obviousness is the simple fact that none of the applied references shows or suggests "an electrical feed through assembly...[that has] ground wire bond areas...that are electrically connected to each other."

This feature is not shown in either the Bargar or Kluitmans patents.

Moreover, it is not shown in the Wolf patent, which was cited for showing this ground wire bond area feature. Specifically, the bonding pads 120 shown in, for example, Figs. 4 and 5 of the Wolf patent are signal wire bond areas that are not electrically connected to each other.

Possibly, the ground paths 118 of the Wolf patent were considered as being relevant to the claimed ground wire bond areas. Such an analogy, however, would be inappropriate since these ground paths 118 of the Wolf patent do not have wire bond areas. They are simply shielding structures for the capacitive connections provided by and accessed by the bond areas 120 as shown in Fig. 5 of the Wolf patent.

This interpretation on the part of the Applicant is supported by the following portion of the Wolf specification.

A further plurality (twenty in the depicted example) of ground paths 118 each comprising substrate ground paths 118 extending through all layers 52-60 spaced apart around the periphery of the co-fired metal-ceramic substrate 40. The ground paths 118 also comprise one or more ground trace, e.g. ground plane traces or layers 132, 134 and 136 shown in FIG. 5, extending peripherally along the substrate layer surfaces from the substrate ground paths 118 to the substrate edge 46. The ground trace 132 assists in making electrical contact with the ground solder joint 130 and with the substrate-ferrule braze joint 48. The ground traces 134 and 136 extend to a metallization layer 140 formed over the

26 August 2005
Application No.: 09/884,844
Docket: 1066us

substrate edge 46. The number of substrate ground paths 118 substrate ground paths 118 formed in this manner is selected to provide a total ground via cross-section area that minimizes the inductance of the filtered feedthrough assembly 10 resulting in favorable insertion loss of EMI and unwanted signals.

See Wolf patent at column 6, beginning at line 66

From this paragraph, it is evident that the ground paths 118 are not connected to multiple ground wire bond areas, but are merely for shielding.

The final Office Action cites to column 20, lines 58-63 for the disclosure of "ground electrodes that are electrically connected to each other." The Wolf patent, however, has no column 20. And, in any event, the claim requires ground wire bond areas, not mere "electrodes" as argued in the Office Action.

Moreover, Applicants respectfully believe that one skilled in the art would not combine the references as asserted in the pending Office Action. The reasoning is that the Bargar and Kluitmans patents are each directed to optoelectronic modules, and show such modules. In this sense, they are relevant to the present claimed invention.

In contradistinction, the Wolf patent is directed to human, *in vivo*, bio-compatible, electrical devices and is not intended to not provide connections to optoelectronic devices. In fact, the Wolf capacitive electrical connections would generally not work with many opto electronic devices, as those semiconductor lasers shown in both the Kluitmans and Bargar patents, which often require low voltage, and high direct currents. In short, the Wolf patent does not concern optoelectronic hermetic packages as claimed and one skilled in the art would not be motivated to combine them as advanced in the pending Office Action.

Claim 2 is further distinguishable over the applied references. It requires "an array of leads extending from the electrical contact areas away from the frame. The Wolf assembly, however, does not have such leads.

26 August 2005
Application No.: 09/884,844
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Claim 5 requires that at least some of the ground wire bond areas are located between two of the signal wire bond areas on the feedthrough assembly. Claim 6 describes that the ground wire bond areas are interdigitated with the wire bond areas. This is shown, for example, in Fig. 2 of the present invention showing the alternating ground and signal wire bond areas. This is not shown by any of the applied references. As noted previously, the Wolf patent does not show ground wire bond areas but simply shows ground structures that are not connected to any wire bond areas as claimed. None of the applied references shows or suggests interdigitation.

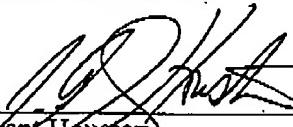
Claim 7 requires the use of conductive plugs that extend through the feedthrough assembly to the frame. The wire bond areas are located on top of the plugs. As noted previously, the ground structures in the Wolf patent do not have wire bonding areas.

Finally, claim 9 is believed to be further patentable since it shows conductive plugs that extend between a top of the feedthrough assembly and a bus through the assembly. The wire bond areas are located on top of these conductive plugs. The combination of wire bond areas and a connecting bus is not shown by the applied references.

For the foregoing reasons, Applicants believe that the pending rejections should be withdrawn, and that the present application should be passed to issue. Should any questions arise, please contact the undersigned.

Respectfully submitted,

Houston Eliseeva LLP

By 
J. Grant Houston
Registration No.: 35,900
4 Militia Drive, Ste. 4
Lexington, MA 02421
Tel.: 781-863-9991
Fax: 781-863-9931

Date: August 26, 2005

26 August 2005
Application No.: 09/884,844
Docket: 1066us

Claims Appendix

1. (previously presented) An optoelectronic hermetic package, comprising:
a frame defining a hermetic boundary; and
an electrical feedthrough assembly on the frame 1) providing electrical connections between signal wire bond areas within the hermetic boundary and electrical contact areas outside the hermetic boundary and 2) ground wire bond areas within the hermetic boundary that are electrically connected to each other.
2. (original) A package as claimed in claim 1, further comprising an array of leads extending from electrical contact areas away from the frame.
3. (original) A package as claimed in claim 2, wherein the leads extend laterally relative to the frame.
4. (previously presented) A package as claimed in claim 2, wherein the leads are pins that extend vertically relative to the frame.
5. (original) A package as claimed in claim 1, wherein at least some of the ground wire bond areas are located between two of the signal wire bond areas on the feedthrough assembly.
6. (original) A package as claimed in claim 1, wherein the ground wire bond areas are interdigitated with signal wire bond areas.
7. (original) A package as claimed in claim 1, further comprising conductive plugs extending between a top of the feedthrough assembly and the frame, the ground wire bond areas being located on a top of the conductive plugs.

26 August 2005
Application No.: 09/884,844
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8. (original) A package as claimed in claim 1, wherein the assembly provides electrical connections between the ground wire bond areas and the frame.
9. (original) A package as claimed in claim 1, further comprising conductive plugs extending between a top of the feedthrough assembly and a bus through the assembly, the ground wire bond areas being located on a top of the conductive plugs.

26 August 2005
Application No.: 09/884,844
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Evidence Appendix

None

26 August 2005
Application No.: 09/884,844
Docket: 1066us

Related proceedings appendix

None

PTO/SB/21 (08-04)

Approved for use through 07/31/2006. OMB 0651-0031
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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

12

Application Number

09/884,844

Filing Date

June 19, 2001

First Named Inventor

Robert L. Payer

Art Unit

2826

Examiner Name

Erdem, Fazli

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12

Attorney Docket Number

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ENCLOSURES (Check all that apply)

- Fee Transmittal Form
 Fee Attached
 Amendment/Reply
 After Final
 Affidavits/declaration(s)
 Extension of Time Request
 Express Abandonment Request
 Information Disclosure Statement
 Certified Copy of Priority Document(s)
 Reply to Missing Parts/ Incomplete Application
 Reply to Missing Parts under 37 CFR 1.52 or 1.53

- Drawing(s)
 Licensing-related Papers
 Petition
 Petition to Convert to a Provisional Application
 Power of Attorney, Revocation
 Change of Correspondence Address
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 Request for Refund
 CD, Number of CD(s) _____
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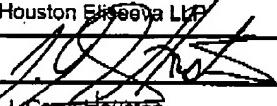
Remarks

- After Allowance Communication to TC
 Appeal Communication to Board of Appeals and Interferences
 Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
 Proprietary Information
 Status Letter
 Other Enclosure(s) (please identify below):

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AUG 29 2005

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Houston Eliseeva Ltd		
Signature			
Printed name	L-Grant Houston		
Date	August 26, 2005	Reg. No.	35,900

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Claire J. Handalian		Date
			August 26, 2005

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Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2005

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

475.00

Complete if Known

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Application Number

09/884,844

Filing Date

June 19, 2001

First Named Inventor

Robert L. Payer

Examiner Name

Erdem, Fazli

Art Unit

2826

Attorney Docket No.

1066us

METHOD OF PAYMENT (check all that apply)

- Check Credit Card Money Order None Other (please identify): _____
- Deposit Account Deposit Account Number: 501547 Deposit Account Name: Axsun Technologies, Inc.
- For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
- Charge fee(s) indicated below Charge fee(s) indicated below, except for the filing fee
- Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity	Fee (\$)	Small Entity	Fee (\$)	Small Entity	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Small Entity	Fee (\$)	Fee (\$)
- 20 or HP =	x	=			50	25
HP = highest number of total claims paid for, if greater than 20.					200	100
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)		360	180
- 3 or HP =	x	=				
HP = highest number of independent claims paid for, if greater than 3.						

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Filing Brief in Support of Appeal (250) + Ext. for reply 2nd month (225)

Fee Paid (\$)

\$475.00

SUBMITTED BY

Signature

Name (Print/Type): J. Grant Houston

Registration No.
(Attorney/Agent)
35,900

Telephone 781-863-9991

Date August 26, 2005

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